

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

p'69c

Copy, 3



Issued February 12, 1910.

U. S. DEPARTMENT OF AGRICULTURE,

BUREAU OF PLANT INDUSTRY—Circular No. 48.

B. T. GALLOWAY, Chief of Bureau.

THE PRESENT STATUS OF THE TOBACCO INDUSTRY.

BY

WIGHTMAN W. GARNER,

PHYSIOLOGIST IN CHARGE OF TOBACCO INVESTIGATIONS.

BUREAU OF PLANT INDUSTRY.

Chief of Bureau, BEVERLY T. GALLOWAY.
Assistant Chief of Bureau, G. HAROLD POWELL.
Editor, J. E. ROCKWELL.
Chief Clerk, JAMES E. JONES.

THE PRESENT STATUS OF THE TOBACCO INDUSTRY.

INTRODUCTION.

Tobacco has occupied an important position as a money crop in a number of the Eastern States since the earliest days of the colonies. It is a crop which is remarkably sensitive, as regards quality, to the conditions under which it grows, and the requirements for producing the finer grades are quite exacting. This fact limits the output of strictly first-class tobacco, so that this product frequently commands a high price in the market as compared with other crops. The high prices in some cases warrant intensive systems of production, and the discovery of new varieties or new methods of production may bring large profits to growers in limited areas or in larger areas for short periods of time. In every such case, however, the history of the industry shows there has been a readjustment of conditions, resulting usually from overproduction, bringing about a lower level of prices, which may leave only a fair margin of profit, or in extreme cases no profit at all.

The demand for new crops in various sections, brought about by the needs for diversification in connection with improving crop yields, controlling diseases and insects, and changes in economic conditions due to other causes, has served in many cases to direct attention to the possibility of introducing tobacco culture into new territory as a money crop. In some instances, moreover, the abnormally large profits obtained on special types of tobacco grown on a comparatively small scale have led to the utilization of these results in the exploitation of large tracts of land thought to be adapted for the special type, often with the result of disappointment and financial loss to those who are induced to invest in these enterprises.

In considering the advisability of undertaking the culture of tobacco in any locality, especially in new territory, there are several important facts concerning the industry which should be kept in mind, and it is mainly for the purpose of bringing these facts to the attention of the prospective grower that this publication has been prepared.

DEVELOPMENT AND SPECIALIZATION OF THE TOBACCO INDUSTRY.

The culture of tobacco as a commercial crop began in Virginia in 1612 and soon became so profitable that food crops were neglected and drastic regulations were required to control the output. The industry promptly spread into Maryland, and when Kentucky was settled tobacco at once became the principal commodity in that territory, whence it was carried into Tennessee and Missouri. Tobacco culture was early introduced into North Carolina from Virginia, and about 1850 in the former State it received a great impetus from the discovery of a new process of curing by means of artificial heat. About 1890 this new phase of the industry became commercially important in eastern South Carolina.

The New England colonists also early began the culture of the crop, but it did not become of much commercial importance until about the middle of the last century. At this time the value of the tobacco produced in that section for the manufacture of cigars began to be recognized, and the industry became exceedingly profitable. From New England the growing of these cigar types was extended into Pennsylvania and New York and thence into Ohio and Wisconsin. About 1890 the production of cigar tobaccos from Cuban and Sumatran seed began to assume importance in Florida and southern Georgia.

The marked effects of soil and climatic conditions on the character of the tobacco produced were early recognized, and these influences, together with improvements in methods of growing and handling, have brought about important economic readjustments, resulting finally in a highly specialized industry. The first tobacco produced in Virginia naturally found a market in the mother country, England, while the western product went to New Orleans and thence into France and other European countries. The discovery of distinctively new types, such as Burley, and of new methods of production, as with the yellow or flue-cured tobacco of Virginia and the Carolinas, has modified to some extent the demands of foreign markets, but, nevertheless, much the same territory has continued for many generations to supply the principal needs for export purposes. The demands for domestic consumption, as chewing and smoking tobaccos, have been modified to a greater extent, perhaps, by these factors, but here again present requirements are firmly established and can be changed only under strong influences.

The requirements for cigar tobacco are very exacting, differing essentially from those for other types of leaf; consequently the production of such tobacco, in some of its phases, necessitates culture of a very intensive character. Certain foreign types have come to

be considered as standards of excellence by which all high-grade domestic types must be measured. For many years efforts have been made to reproduce these foreign types in certain sections of the country, and in some cases these efforts have been largely successful.

The history of the tobacco industry in this country furnishes abundant proof of the fact that tobacco of any given properties or qualities can only be produced under certain fixed conditions of soil, climate, etc., and all of the established tobacco sections produce types which are recognized by the trade as possessing certain definite characteristics adapted to specific purposes. One section may produce tobacco "just as good" as another, yet differing from it sufficiently to prevent its being used for the same purpose.

THE DIFFERENT CLASSES OF TOBACCO.

As has already been stated, variations in soil and climatic conditions combined with differences in methods of production give rise to certain well-defined types, and on these are based present market requirements. The following classification, while not intended to be complete, is fairly representative of the industry as a whole.

CIGAR TYPES.

Broadly speaking, there are two principal areas producing cigar tobacco between which lie a group of States producing practically all of the manufacturing and export types. The northern cigar-tobacco area includes a large portion of the Connecticut Valley in the States of Connecticut and Massachusetts; two districts in New York embracing Onondaga and Chemung and Tioga counties, respectively, with portions of adjoining counties in each case; Lancaster and adjoining counties of Pennsylvania; Montgomery, Miami, and contiguous counties of Ohio, and portions of southern and western Wisconsin. The southern cigar-tobacco area includes Gadsden County, Florida, and the adjoining county of Decatur, Georgia, with scattering plantations in adjacent counties, small sections in a few counties of southern Alabama, and Anderson and Nacogdoches counties, Texas.

There are three subtypes of cigar leaf corresponding to the three components of the cigar, namely, wrapper, binder, and filler.

WRAPPER AND BINDER LEAF.

The wrapper, which gives finish to the cigar, is the highest priced tobacco produced, and for it the trade requirements are most exacting. Color, burning qualities, grain, texture, and elasticity are all important factors. The product imported from Sumatra is the standard and commands high prices. The bulk of the domestic cigar-wrapper leaf is now produced on the light soils of the Connecti-

cut Valley and western Florida. Thorough experience and good judgment in the growing and handling of this tobacco from beginning to end are essential to success. The average yield to the acre in the Connecticut Valley is about 1,600 pounds. In Florida both Cuban and Sumatran types are planted, but the latter is believed to produce the best wrapper. The yield to the acre averages about 1,000 pounds for the Sumatran and 700 to 800 pounds for the Cuban.

Binder leaf may be considered as a lower grade of wrapper, and the imperfect leaves from wrapper-producing types are largely used for binder purposes. The requirements for binder are less exacting, especially as regards color, than for wrapper, and the leaf is generally heavier than the wrapper grade. Wisconsin is usually classed as a binder-producing State, for the reason that a large portion of the output is especially adapted for use as binder. The yield to the acre in this State averages 1,200 to 1,300 pounds.

THE SHADE-TOBACCO INDUSTRY.

A few years ago it was found in Gadsden County, Florida, that Cuban and Sumatran seed when grown under an artificial shade of coarse cheese cloth or wooden slats yielded a much higher percentage of wrapper leaf than when grown by the ordinary method in the open field. The market price for this product warranted the intensive methods required in its production, and the industry developed with extreme rapidity in this county and in Decatur County, Georgia, until the annual output reached several million pounds. During the past few years, however, there has been a marked decline in market prices, and as a result the acreage has been much decreased.

For a time the prices obtained by the growers left a good margin of profit, but at present the market price is little, if any, above the cost of production. The average yield to the acre has been about 1,000 pounds.

Tobacco is also being grown under artificial shade on a large scale in Connecticut, the Cuban type giving the most satisfactory results.

FILLER LEAF.

Theoretically, each plant of the cigar type produces wrapper, binder, and filler, the best lower and middle leaves serving for wrapper and binder and the remainder, especially the heavy upper leaves, being used as filler. The prime requirement for filler tobacco, however, is flavor and aroma, and here the Cuban (usually called Havana) is the standard of excellence. The best filler-producing soils generally give a product too heavy for use as wrapper or binder, though a small percentage of these latter grades may be obtained. The bulk of the filler crop is grown in Ohio, Pennsylvania, and New York.

Filler leaf is grown under a less intensive system than is required for wrapper, and the tobacco soils of these States are, for the most part, quite fertile and well adapted to diversified farming. Cigar-wrapper tobacco is grown mainly on soils too light in character for producing most other crops profitably, and intensive methods with little diversification prevail. With filler leaf, on the other hand, the best results are obtained by utilizing this as the leading money crop in a properly arranged rotation system. The average yield of tobacco to the acre obtained in the filler districts ranges from 900 to 1,400 pounds.

In western Florida, southern Alabama, and eastern Texas a cigar filler is grown from Cuban seed which is characterized by its high aroma. The soils growing this type are less fertile than those of the northern districts, considerably smaller yields being obtained.

EXPORT TYPES.

The following dark fire-cured and dark air-cured tobaccos are known as export types:

DARK FIRE-CURED TOBACCO.

Western Kentucky and the adjoining counties in Tennessee, together with the Piedmont section of central Virginia, produce the greater portion of the dark export tobacco which is cured with open fires. This product, which is grown mainly on clay soils, is very heavy and strong, suited only for export. The soils producing this tobacco are mostly well adapted to growing wheat, corn, clover, and grasses, which should be combined with it in a rotation system. When grown continuously on the same soil the tobacco rapidly depletes the fertility and its culture becomes much less profitable. The average yield to the acre under good management is about 1,000 pounds. The soils of western Kentucky and Tennessee are somewhat stronger than those of Virginia, and consequently less fertilizers are used as a rule.

MARYLAND AND EASTERN OHIO AIR-CURED TOBACCO.

In several counties of southern Maryland and a small section of eastern Ohio a type of dark shipping tobacco is produced which is cured without the use of artificial heat. The bulk of the crop is marketed in Baltimore, whence it is exported to France and other European countries. The average yield to the acre is about 700 pounds.

MANUFACTURING TYPES.

The following kinds of tobacco are known as "manufacturing types:"

BURLEY TOBACCO.

The large area embraced in north-central Kentucky and a strip of territory bordering on the Ohio River in Ohio and Indiana, together with a small area in the southwestern part of West Virginia, produces the bulk of Burley tobacco, used largely for manufacturing but also for export. It has thus far reached its highest commercial development in limited areas in Kentucky and southern Ohio. The soil is of limestone origin and very fertile. These fine bluegrass soils are much more valuable for general farming than those on which the heavy shipping types are grown. As would be expected, the average yield of tobacco to the acre on these soils is considerably above that on lands producing dark export tobacco. Little or no artificial heat is used in curing this type.

DARK MANUFACTURING TOBACCO.

In the section of Kentucky and Tennessee lying between the western export and the Burley districts and in a few counties of Virginia immediately north of the fire-cured belt, types of dark manufacturing leaf, cured without the use of fires, are extensively produced. In the northern portion of the Kentucky area, known as the Green River district, the conditions governing the production of this tobacco are quite similar to those in the dark export section. The southern portion, known as the upper Cumberland district, grows principally the so-called "one-sucker" variety. The yield in this district is somewhat less than that of the Green River district. The Virginia area produces the so-called sun-cured tobacco much prized for the manufacture of chewing plug, because of its fine flavor. The average yield is 700 to 900 pounds to the acre.

BRIGHT FLUE-CURED TOBACCO.

Extending from the lower edge of the dark tobacco belt of Virginia into northern and eastern North Carolina and eastern South Carolina is a large territory producing the so-called yellow tobacco, which is cured entirely with artificial heat introduced into the curing barn through a system of flues. This product is prized especially for manufacturing purposes, though considerable quantities are also exported. The flue-cured tobacco industry has played a conspicuous part in the development of a large portion of the Piedmont section of North Carolina and southern Virginia. It is noteworthy that in this section, now spoken of as the "old belt" of the bright tobacco industry, the finest quality of leaf is produced on light soils not well adapted to general farming. Here again, however, as in the case of Burley tobacco, the rapid extension of the industry into eastern North and South Carolina, comprising the so-called "new belt," has brought about a gradual lowering of prices, and the average profits to the

grower are little, if any, above those for most other manufacturing and export types.

The finer grades are used as wrappers on manufactured plug and command relatively high prices. To produce a high-grade wrapper requires just the right sort of soil and favorable seasons combined with skill and good judgment on the part of the grower. The yield in the old belt averages 700 to 800 pounds to the acre, while in the new belt, especially in South Carolina, the average yield is about 100 pounds more to the acre.

PERIQUE.

This product is grown in St. James Parish, La., on a small scale, and the method of handling is unique. It is highly aromatic, and is used mostly for blending with other smoking types. Each grower manufactures his own product into packages known as "carrottes," and the entire output is marketed through one concern. The yield averages about 450 pounds to the acre.

PRESENT STATUS OF THE INDUSTRY AS REGARDS SUPPLY AND DEMAND.

It has been pointed out that the tobacco industry has become highly specialized in that each of the recognized tobacco-growing districts produces a type of leaf known by the trade to possess definite qualities which adapt it to certain specific purposes. These various types are only interchangeable within narrow limits. For example, the foreign consumer has been accustomed for generations to the heavy, fire-cured type which would be unacceptable to the consumer of this country, while the reverse would be true with our manufacturing and cigar types.

Thus any given variety of tobacco or the product of any given locality in order to prove successful must secure a standing before the trade on its own merits. In the majority of cases this is likely to prove an insurmountable difficulty for a new variety or the product of a new locality. On the other hand, there is always opportunity for the improvement in quality and yield of the recognized standard types of leaf.

Another important factor in the question of supply and demand is the fact that the manufacturer of an established line of goods must be reasonably assured of an adequate and permanent source of supply of known quality.

It is apparent, therefore, that there is a permanent demand for more or less definite amounts of certain well-established types of tobacco, but as soon as the supply of any of these types greatly exceeds this demand, prices at once fall to a point where its production becomes unprofitable. In the few cases in which the discovery of

new varieties or new methods of production have introduced new or improved types of leaf, bringing fancy prices in the market, the rapid increase in their production has forced these prices down to a point approaching the general level for other similar types.

Since the requirements as to soil and climatic conditions and methods of culture and handling are very exacting in the production of the finest grades of leaf, overproduction is most frequent in the medium and lower grades. By far the greatest profits are realized from the fancy grades of the various types. Nevertheless, the absolute quantities of the finest grades required by the trade are much less than those of the medium grades, so that under some circumstances even these may bring relatively low prices.

The average annual production of the various types of tobacco in the United States in round figures is shown in the following table:

Type of tobacco.	Pounds.
Cigar leaf.....	160,000,000
Dark export (fire cured).....	210,000,000
Maryland and eastern Ohio export (air cured).....	22,000,000
Dark manufacturing (air cured).....	65,000,000
Burley.....	190,000,000
Bright flue cured.....	200,000,000
Perique.....	200,000
	847,200,000

The relative quantities of the several types, as well as the total amount produced, vary considerably from year to year, depending chiefly on the character of the growing season and on prevailing market prices for the preceding crops. On the other hand, market prices are of course strongly influenced by the available and also by the visible supply. The output is thus automatically regulated to a large extent by the market demands, rising prices leading to increased production, and vice versa. The important point to be observed in this connection is that the areas which are at present producing the various types of tobacco are capable of enormously increasing their output if market demands should warrant such increase. With the exception of very limited areas producing cigar-wrapper leaf under intensive systems, the soils in the tobacco districts are, as a rule, adapted to the growing of other important crops, and only a comparatively small portion of the available acreage is used for the culture of tobacco. It is true, however, that not all of this available acreage will produce the finer grades of leaf.

Tobacco is a luxury rather than a necessity, so that the demand, especially in the case of the higher priced goods, is very sensitive to general financial and trade conditions, periods of general business depression invariably resulting in a marked decrease in the quantity of tobacco consumed.

In the cigar tobaccos, efforts to produce a wrapper leaf to compete with the imported Sumatran have led to the development of the shade-tobacco industry. Because of the high cost of production this tobacco does not compete with the medium and low-grade domestic wrapper grown by the ordinary methods, so that the demand is limited and the acreage necessary to meet this demand is very small. The annual imports of wrapper leaf amount to only about 7,000,000 pounds. Domestic filler leaf does not yet compete successfully with the imported Cuban. There is a fairly constant demand for good domestic filler, but at prices limited by fixed retail prices for domestic cigars. The demand for these tobaccos, however, is particularly affected by general business conditions.

In the dark export tobaccos there has been a steady increase in demand in the past, but it is noteworthy that many of the foreign countries which have been the chief importers of these types are now active in promoting the home production of tobacco, and it is quite possible that future demands for export will be confined more and more to the relatively high grades.

The consumption of chewing and smoking tobaccos in this country shows a steady increase, and this of course has required increased quantities of Burley and other manufacturing types. On the other hand, the prices of Burley and of some of the dark air-cured manufacturing tobaccos have steadily declined, until within the past few years concerted action has been undertaken by the growers to curtail the production.

With the bright flue-cured tobacco, the product of the old belt, as a whole, appears to be preferred over that of the new belt, and under present conditions this section is largely dependent on this product as a money crop. The greater portion of the new belt is adapted to cotton or peanuts, and only a small portion of the available acreage is utilized for growing tobacco. The relative production of these money crops depends largely on their comparative market prices.

From a consideration of these facts concerning supply and demand, it is not deemed wise under existing conditions to stimulate the culture of this crop in sections which are not already growing it commercially. Probably no other crop of equal money value is so strongly influenced by soil and climatic conditions as regards character and quality of product and there is no market demand for types of leaf not already well known to the trade. Even if a superior type can be produced, a place must be found for it on the market and the trade must be assured of an adequate and permanent supply. These are obstacles which it is generally difficult to overcome. As regards the types of leaf already well recognized by the trade, the old tobacco districts are capable of

more than meeting present demands. For these reasons caution should be used in undertaking the culture of tobacco on a commercial basis in new territory.

SUMMARY.

From the foregoing considerations regarding the development and the natural division of the tobacco industry into types, according to the conditions under which these are produced and the uses to which they are put and the relation of supply to demand in each case, the following general conclusions may be drawn:

There are a number of distinct types of tobacco produced, each of which is adapted to certain definite trade requirements.

These differences in type are the result of the variations in soil and climatic conditions under which the tobacco is grown and, to a lesser degree, of different methods of production.

The recognized tobacco-growing districts thus produce types of leaf known by the trade to possess definite qualities which adapt them to definite purposes.

Present trade requirements as regards type differences are based largely on the character of the tobaccos produced by sections in which tobacco culture has long been an important industry and, therefore, have become firmly established.

The merits of a product from a new locality or a new variety must be demonstrated before it will be accepted by the trade, and unless such a product is practically identical with an established type, with reference to trade standards, it will generally fail to secure recognition. Moreover, the sections in which tobacco culture is already firmly established are capable of greatly increasing their present output of the various types if market demands should warrant such increase, hence extension to new territory should not under present conditions be unduly stimulated.

There is a permanent demand for more or less definite quantities of certain well-recognized types of tobacco, but any considerable increase in output above this demand reduces prices to a point where the crop becomes unprofitable.

In the few instances in which a new variety, as the White Burley, or the product of new methods of growing and handling, as the bright flue-cured tobacco, has temporarily commanded fancy prices, the rapid increase in production has reduced the profits to the grower to a level comparable with those for other similar types. In the case of the shade-grown cigar tobaccos, which for a time were very profitable in Florida and Georgia, present prices are such as to leave little or no profit to the grower.

There is room for improvement in both the yield and quality of the output of the different tobacco-growing sections. With the exception of small areas producing high-grade cigar-wrapper leaf under intensive systems, and for which there is, relatively, a very limited demand, the best results are obtained by growing tobacco as a money crop in a properly planned rotation system with other crops adapted to the local conditions.

Approved:

JAMES WILSON,

Secretary of Agriculture.

WASHINGTON, D. C., January 5, 1910.

[Cir. 48]

O

